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# Producers' Equipment—Growth, Replacement, and Stock

THIS article presents newly developed information on private producers' durable equipment of value in analyzing the postwar investment expansion. From the new data it is possible to approximate: (1) the extent to which producers' durable equipment purchases have been for replacement as distinguished from expansion, and (2) the increase in the various types of producers' durable equipment in use. Information was also developed on alternative ways of measuring capital consumption.

The results presented are tentative, in part because of the exploratory nature of the work and in part because of data deficiencies and conceptual difficulties that handicap statistical measurement in this field.

While primary interest is in the postwar period, much of the analysis covers the years 1941–52. A broader perspective is gained in this manner; also, as will be explained later, one of the major limitations of the statistical method underlying the estimates is thereby overcome.

## Gross and Net Purchases

Business purchases of producers' durables more than doubled between 1946 and 1952. This increase extended to all major groups of equipment (table 1). High farm incomes resulted in a particularly favorable market for agricultural machinery and tractors; and the demand for motor vehicles was specially stimulated by the fact that heavy wartime cut-backs in production had given rise to a substantial backlog.

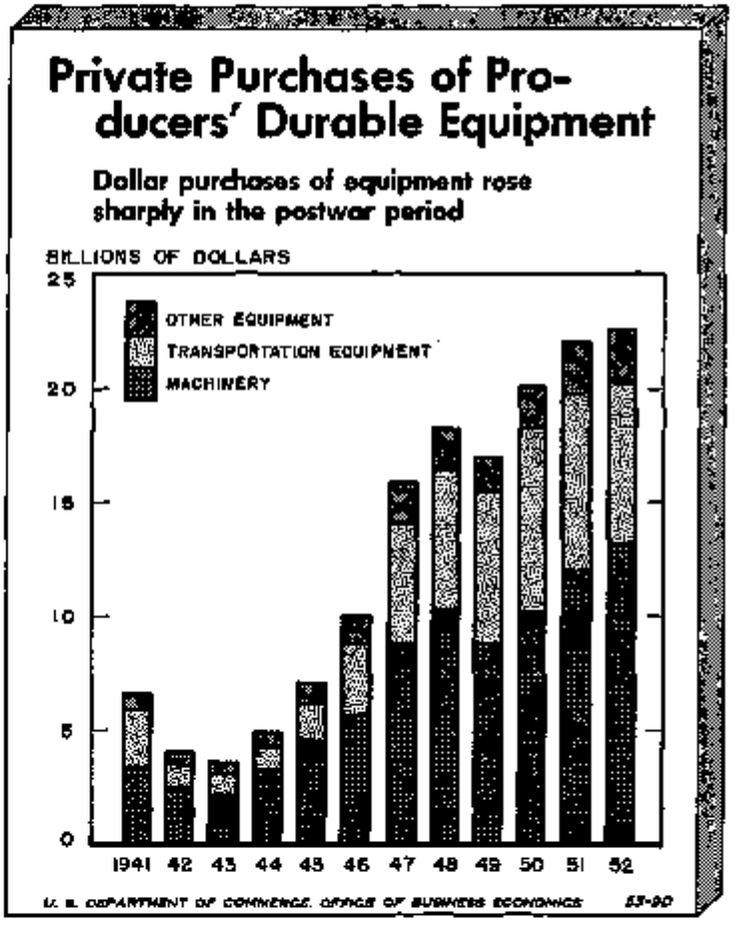
The estimates included in the table cover gross private purchases of producers' durable equipment. Government purchases of equipment, which were substantial during World War II, are excluded; also excluded are postwar private purchases of government surplus equipment.

In the following sections an attempt is made to measure the portion of private purchases of newly produced equipment that is for replacement and the portion that represents additions to the stock of capital equipment.

### *Measures of capital consumption*

It is customary business practice to prorate the original cost of a depreciable asset over its useful life. This allocation takes the form of a depreciation charge to expense and is reflected in the net income of the accounting period. The annual depreciation charge is thus a measure of use in that it provides a rough estimate of the portion of service life in existing equipment that has been used up during the period. The net value of an asset (i. e., original cost less cumulative depreciation) is a measure of the remaining service life.

Discards are an alternative measure of use. An asset is assumed to remain as new until discarded, at which time its cost is completely written off. This assumption provides a useful basis for making estimates of short-term replacement requirements and changes in capacity. The estimates are necessarily approximations since the older machines in use do not perform as well as new ones. But generally speaking the discard method should provide better estimates of replacement requirements and changes in capacity than does the depreciation method.




For example, suppose that a manufacturer has purchased 10 new trucks with a useful life of 5 years. These trucks will be depreciated every year but discarded only at the end of 5 years. Thus, the discards would be a better measure of annual replacement requirements than depreciation. A similar illustration holds with respect to stocks of equipment in use. In the example given, at the end of 4 years the 10 trucks would have a depreciated asset value of only one-fifth of their original cost. The capital stock would be measured as the equivalent of 2 new trucks by the depreciation approach, as contrasted with 10 trucks by the discard approach.

NOTE.—MR. NASSIMBENE AND MR. WOODEN ARE MEMBERS OF THE NATIONAL INCOME DIVISION. MR. ROBERT C. WASSON PREPARED THE ESTIMATES OF PRODUCERS' DURABLES IN TABLE 1.

Thus, while in this example the discard approach somewhat overstates effective capacity in the second period as compared with the first, the error is considerably less than the relative understatement of effective capacity suggested by a measurement based upon the depreciation approach.

Business accounting data on depreciation and discards of producers' durable equipment are not compiled on a comprehensive basis in the United States. In the present report depreciation and discards were calculated by applying estimates of average useful life to data on purchases of producers' durables. In calculating depreciation charges, the straight line method was used. Both depreciation and discards were calculated in terms of original cost as well as in current prices.[1]

Some of the limitations of the estimates which stem from these procedures must be emphasized since they have an important bearing on the interpretation of the data.

## *Conversion to current dollars*

Original cost is the usually accepted base for measuring depreciation in accounting practice. However, other bases are also useful in economic analysis. For instance, in estimating the portion of producer durable output that is for replacement purposes, it is more meaningful to value both depreciation and gross additions on the same cost basis; in this study, current year cost is used. (By current year cost is meant the cost actually prevailing during the year in question. In this study, for example, a current year cost was developed for each of the 11 years covered.)

**Table 1.—Private Purchases of Producers' Durable Equipment, 1941–52** [1]

(Billions of dollars)

| Type of equipment | 1941 | 1942 | 1943 | 1944 | 1945 | 1946 | 1947 | 1948 | 1949 | 1950 | 1951 | 1952 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Producers' durable equipment, total | 6.6 | 4.6 | 3.6 | 4.9 | 7.1 | 10.9 | 15.8 | 16.2 | 17.0 | 20.1 | 22.1 | 22.6 |
| Machinery | 3.4 | 2.5 | 2.2 | 3.3 | 4.6 | 6.7 | 8.8 | 10.3 | 8.8 | 10.2 | 12.1 | 13.2 |
| Agricultural machinery and tractors | .7 | .4 | .2 | .6 | .7 | .8 | 1.2 | 1.8 | 1.0 | 2.0 | 2.3 | 2.3 |
| Other machinery | 2.7 | 2.1 | 2.0 | 2.7 | 3.9 | 6.1 | 7.6 | 8.5 | 6.9 | 8.2 | 9.8 | 10.9 |
| Transportation equipment | 2.6 | 1.0 | .8 | 1.0 | 1.8 | 3.1 | 5.2 | 5.1 | 5.7 | 8.1 | 7.8 | 7.1 |
| Motor vehicles | 1.9 | .4 | .6 | .5 | 1.1 | 2.4 | 4.2 | 4.9 | 5.4 | 7.1 | 6.5 | 5.8 |
| Other transportation equipment | .6 | .6 | .5 | .5 | .5 | .7 | 1.0 | 1.2 | 1.3 | 1.0 | 1.3 | 1.3 |
| Other equipment | .7 | .5 | .5 | .6 | .9 | 1.3 | 1.8 | 1.8 | 1.5 | 1.8 | 2.2 | 2.3 |

1. Revised estimates of producers' durables on a product basis and not yet incorporated in the national income accounts. The series employs the Standard Industrial Classification of November 1945. Capital outlays charged to current expense have been excluded from this table.

Source: U. S. Department of Commerce, Office of Business Economics.

Adjustment of original cost depreciation to alternative bases of valuation requires the use of price indexes. Of the many problems that arise in connection with price deflation only one will be singled out for comment, as being particularly relevant in the present connection.

Over the long run, price indexes tend to overstate effective price increases and understate price decreases because they do not take full account of the improvements in the quality of the product the prices of which they measure. In the instance of producers' durables, quality improvements are, generally speaking, taken into account to the extent that they are reflected in increased costs of producing the equipment; generally speaking, no account is taken of quality improvements which are not reflected in increased costs.

Quality improvements are of particular importance in the case of producers' durables, where technological progress is especially prominent. Depreciation charges converted to a current dollar basis tend therefore to be overstated; the indicated amount of producers' durable equipment that is required for replacement purposes is too high; and the amount representing net investment is too low. Even though the present estimates cover only a decade, they are affected by price movements that have occurred over a considerably longer period because of the life span of producers' durable equipment.

## *Straight line depreciation*

Depreciation may be allocated by any of several methods. In this study, the straight line method was used. Equipment, for example, with a useful life of 5 years was depreciated at the rate of 20 percent a year on its cost for 5 years.

The straight line method is perhaps the one most frequently used in industry. Other methods are used to some extent. In the service output method, the depreciation charge varies with production. A third method employs a fixed rate of depreciation on the net asset value of the equipment (i. e., original cost less accrued depreciation).

The straight-line method tends to underestimate the use derived from equipment in its early years and overestimate the use obtained in later years. In other words, new equipment tends to be used more than old equipment because it is cheaper to operate. If depreciation is measured on a straight-line basis in a stationary economy, these two factors offset each other. But in an expanding economy the method understates the rate at which productive services that are embodied in the stock of capital equipment are being used up.

## *Average useful life*

Among the most serious limitations of the present estimates is the assumption that had to be made regarding the average useful life of the various types of producers' durable equipment. The only comprehensive information relating to this subject that is now available is the average useful lives suggested by the Bureau of Internal Revenue (BIR) as a guide for calculating depreciation for tax purposes; the present estimates rely largely on this source. To the extent that the BIR life periods depart from actual economic useful life the estimates presented in this report must be qualified.

It is difficult to appraise the extent to which actual useful life spans depart from the BIR averages and the direction of the departures. A study of components of the transportation equipment group for which physical stock data were available indicated that the actual life span exceeded the life suggested by the BIR. Consequently, the BIR-based estimates of capital consumption for these types of equipment, which are incorporated in this report, are too high as a measure of economic use. (And the associated measures of capital stock which will be introduced later are too low.) It is felt, however, that this bias is not typical of producers'

1. The estimates of purchases rely heavily on data from the Census of Manufactures. The principal source of useful life data was Bulletin F of the Bureau of Internal Revenue, which gives the average life expectancies for specific items of equipment for guidance in calculating depreciation charges for tax purposes. This source was supplemented by data from other government agencies and local distributors of equipment. (In a few instances, the useful life approach was not used. The principal exceptions were in railroad equipment where accounting data were used to a considerable extent.)

The estimates of useful life were applied to detailed Census of Manufactures data for selected years to derive useful life distributions for about 50 different groups of equipment. The distribution of life expectancy for each group was then applied to corresponding estimates of purchases of equipment to calculate depreciation charges and discards.

Price indexes of the Bureau of Labor Statistics and of the Interstate Commerce Commission relating to the various categories of producers' durable equipment, were the major source of information for converting original cost depreciation and discards into current prices.

This price information was used also to express gross purchases, depreciation, and discards of producers' durable equipment in constant dollars. This was necessary to derive the data on the stocks of producers' durable equipment introduced later in the text. These data were obtained by cumulating constant dollar purchases and deducting discards and, in the case of net stocks, accrued depreciation charges. A statement explaining the methods underlying the estimates is available on request.

The data on discards were developed in connection with exploratory work on replacement requirements for the Department of the Air Force.

durable equipment as a whole because of special factors present in transportation equipment.

### *Time pattern of discards*

The foregoing discussion, relating primarily to depreciation, applies with at least equal force to the estimates of discards. For discards, the allocation problem is more acute because actual discards may differ widely from calculated discards based on average life expectancy even though the expectancies may be approximately correct.

The useful life estimates of the BIR are average life expectancies for specific categories of equipment. The actual useful life for specific units included in a given category varies. In this study, the BIR averages were used in full detail; however, no attempt was made to estimate dispersion patterns around each of the BIR averages. From preliminary tests it would appear that the statistical summaries for depreciation are substantially the same for the average method as for the dispersion method. The discard estimates, however, may differ appreciably in some years.

A much more important limitation of the discard estimates stems from the fact that the estimating procedures underlying this study could not make allowances for the well-known fact that discards were postponed during the war period, when it was difficult to replace equipment, into the postwar period when new equipment again became available. For this reason the discard estimates that were developed are used only for the war and postwar years combined, on the assumption that the abnormal movements cancelled out over the period as a whole. This assumption is consistent with the data relating to the transportation equipment group to which reference has been made.

**Table 2.—Calculated Depreciation on Stock of Producers' Durables, 1942–52, at Current Cost and Original Cost**

| Year | Depreciation (Billions of dollars) | | Ratio of current to original cost |
|---|---|---|---|
| | At current cost | At original cost | |
| 1942 [1] | 5.2 | 4.5 | 1.16 |
| 1943 [1] | 5.4 | 4.6 | 1.17 |
| 1944 [1] | 5.8 | 5.0 | 1.16 |
| 1945 [1] | 6.2 | 5.5 | 1.13 |
| 1946 | 5.6 | 4.2 | 1.19 |
| 1947 | 6.4 | 5.1 | 1.25 |
| 1948 | 8.2 | 6.6 | 1.26 |
| 1949 | 10.1 | 8.2 | 1.23 |
| 1950 | 11.9 | 10.0 | 1.19 |
| 1951 | 14.7 | 11.9 | 1.24 |
| 1952 | 16.5 | 12.6 | 1.31 |

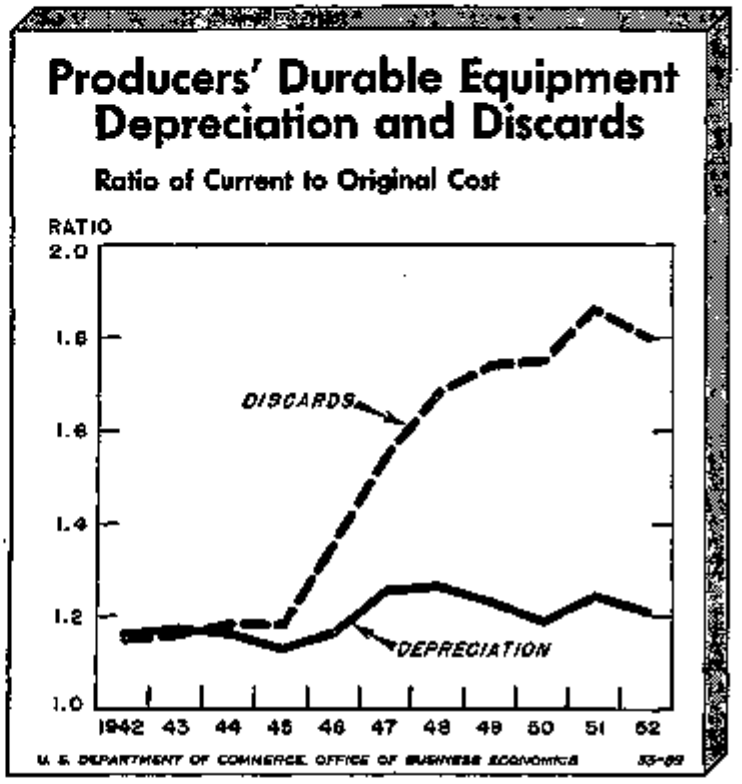
1. Includes for the war period a total of about $3 billions of emergency amortization spread over the 4-year period.

Source: U. S. Department of Commerce, Office of Business Economics.

### *Depreciation at original and current cost*

The depreciation charge to expense is an allowance for the wearing out of assets during the accounting period. If prices are stable, it not only spreads the original cost of the asset over its useful life but also provides a measure of the funds required to maintain the real value of capital, subject to the limitations of the straight line method already noted. In times of price advance, the depreciation charge on an original cost basis performs only the first function; its reinvestment will not be sufficient to maintain the real net asset value or stock of future service life of equipment.

The difference between depreciation at original cost and depreciation at current cost is in the nature of a depreciation valuation adjustment. This valuation adjustment, when added to depreciation at original cost, provides an estimate of depreciation on a current replacement cost basis. The depreciation valuation adjustment would in principle be a desirable addition to national income accounting. Lack of comprehensive data for a sufficiently long period as well as a desire to explore further the problem of quality change and the other problems in estimating depreciation that have been noted, have prevented its introduction thus far.




Subject to the earlier qualifications with respect to quality improvement, average lives, and use of straight line depreciation, table 2 shows that depreciation of producers' durables on a current cost basis has exceeded depreciation on an original cost basis by about 20 to 25 percent during the postwar period. At first glance, this difference may appear small in view of the sharp increases in the price indexes during the postwar period. Two points should be mentioned in this connection. First, and most important, is the fact that the postwar base on which depreciation is computed contains substantial amounts of equipment purchased at the higher postwar prices.

Secondly, the depreciation charges shown here are composite averages for all equipment. For equipment depreciated over a relatively long period, the ratio of current cost to original cost will be higher than the average; for equipment depreciated over a relatively short period of life the ratio will be lower.

For the war years 1942–45, the current cost basis of depreciation exceeded original cost by about 15 percent. The war year ratios reflect the effects of the price increases which occurred between 1932 and the beginning of the war.

### *Gross purchases and depreciation*

Depreciation on producers' durables in use when compared with purchases of producers' durables provides a measure of the portion of new equipment which is for replacement. In current costs, about 60 percent of postwar purchases of

producers' durables was for replacement of service life used up during the year. As can be seen from the following table, the postwar replacement ratio was lowest in 1947, and has risen to almost three-quarters of gross purchases in the past year.

During the war years, use exceeded replacement for privately owned producers' durables. Service life used up during the years 1942–44 was about 30 percent in excess of purchases for the same years. Inclusion of government purchases would, of course, greatly change the wartime picture, since a large part of government financed purchases of equipment during World War II were owned by the Government. Subsequently, a considerable part of the government owned equipment was sold to private companies and thus eventually became a part of privately owned equipment.

Measured in terms of current dollars, about two-thirds of purchases were for replacement of service life used up during the period 1942–52.[2] It may be of some interest to compare this overall ratio with a similar ratio of original cost depreciation to current dollar purchases. The original cost ratio for the 11-year period is substantially lower—55 percent.

## *Discards at original and current cost*

The ratio of discards valued at current cost to the same discards valued at original cost is shown by the upper line of the second chart. This ratio provides a comparison of the current cost of replacing worn-out equipment with its original cost. The excess cost of replacing equipment rose steadily after 1945, from about 20 percent over original cost in 1946 to more than 80 percent over original cost in 1951. In 1952 the ratio of current to original cost declined somewhat.

**Table 3.—Producers' Durables: Purchases and Calculated Depreciation on Stocks of Producers' Durables, at Current Cost, 1942–52**

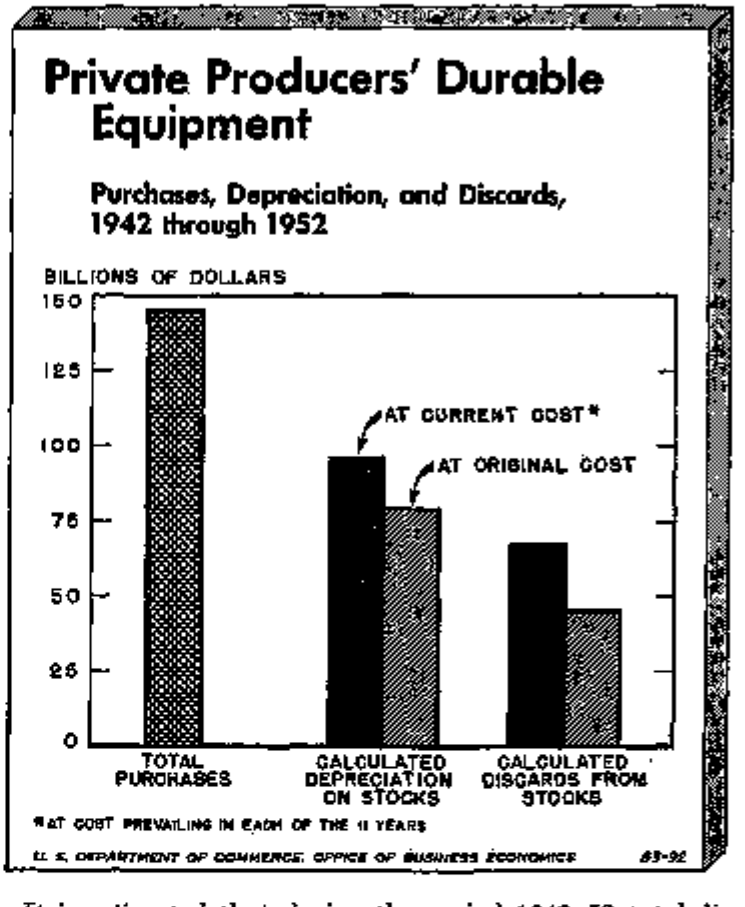
| Year | Billions of dollars | | Ratio of depreciation to purchases of producers' durables |
|---|---|---|---|
| | Depreciation | Purchases | |
| 1942 | 5.2 | 4.0 | 1.30 |
| 1943 | 5.4 | 3.6 | 1.50 |
| 1944 | 5.9 | 4.9 | 1.18 |
| 1945 | 6.2 | 7.1 | .87 |
| 1946 | 5.0 | 10.0 | .50 |
| 1947 | 6.4 | 15.3 | .41 |
| 1948 | 8.3 | 18.2 | .46 |
| 1949 | 10.1 | 17.0 | .59 |
| 1950 | 11.9 | 20.1 | .59 |
| 1951 | 14.7 | 22.1 | .67 |
| 1952 | 16.5 | 22.6 | .73 |

Source: U. S. Department of Commerce, Office of Business Economics.

It will be noted from the chart that the cost ratios for discards are substantially higher than the similar cost ratios for depreciation. The original cost discards relate to the cost of equipment at time of purchase. The life span of producers' durables varies considerably; the average life span is about 15 years. The depreciation estimates, on the other hand, are based on the cost of the full stock of equipment in use and thus include large amounts of equipment purchased in the postwar period at rising prices.

## *Gross purchases and discards*

As has already been explained, the statistical method underlying this report does not lend itself to estimates of discards on an annual basis which take account of the fact that discards of equipment were postponed during the war, when it was difficult to replace equipment, into the postwar period, when new equipment again became available. Hence the dollar discard figures are given only for the period 1942–52 as a whole.




It is estimated that during the period 1942–52 total discards of producers' durable equipment were about $67 billion in current dollars. During the same period, purchases of producers' durables totaled $145 billion. Thus, about 46 percent or somewhat less than one-half of new purchases of producers' durables was for replacement of discarded equipment.[3]

It may be of interest to note that if the comparison with purchases had been made using discards at original cost instead of current cost, a substantially different result would be obtained. As can be seen from the third chart, discards valued at original cost are only about two-thirds of their value in current dollars.

## *Gross purchases, depreciation, and discards*

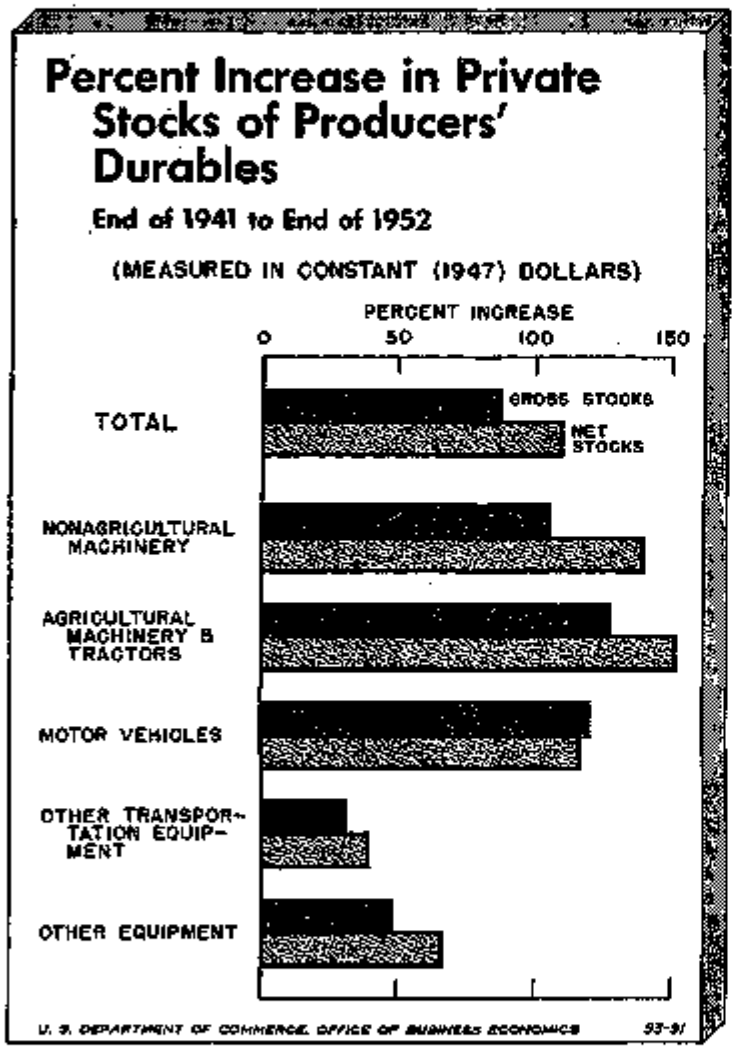
In this chart the salient points developed so far are summarized. The chart indicates that in a period of rising prices such as has prevailed in the United States over a relatively long period, measures of capital consumption expressed in terms of original cost fall short of corresponding measures expressed in terms of current replacement cost by use of available price indexes. The extent of the divergence is much larger for discards than for depreciation. The difference between original and current cost discards reflects the full price rise that has occurred over the average life time of the equipment that expires. The difference between original cost and current cost depreciation charges is much

2. The ratio is practically the same when both purchases and depreciation for the period as a whole are put on a common constant price basis.

3. The ratio is practically the same when both purchases and discards for the period as a whole are put on a common constant price basis.

smaller, because it includes depreciation not only on expiring equipment, but on all types of equipment in use, including recently purchased equipment.

The chart also shows that the measures of depreciation have exceeded considerably the corresponding measures of discards in the period 1942–52. This is the result of the large capital expansion that has occurred during the period. When a new piece of equipment is added to the capital stock a pro rata addition is made to annual depreciation charges, but discards are increased only at a future point of time, the distance of which depends on the lifetime of the new piece of equipment. As a consequence, in a period of expansion in the stock of capital, annual depreciation charges will exceed annual discards.




It is interesting to note that because of this latter factor original cost depreciation was more than sufficient to cover the current cost of replacing equipment discarded during the period. On the other hand, original cost depreciation fell short of depreciation at current cost and thus by itself would have been insufficient to maintain the future service life of equipment as calculated in this report. Each of these comparisons has its own significance. The comparison of original cost depreciation and current cost discards indicates the extent to which current replacements might be met by depreciation charges and is especially relevant to problems of capacity. The comparison of original and current cost depreciation focuses on the current cost of using equipment and is therefore particularly relevant to cost, income, and real wealth problems.

## Changes in Stocks

By expressing purchases and calculated discards in terms of constant (1947) dollars and deducting cumulative discards from cumulative purchases, it was possible to calculate year-end figures of the physical volume of gross stocks of producers' durable equipment. Corresponding figures on net stocks were calculated by deducting accrued depreciation from gross stocks, also expressed in constant dollars.

### *Gross and net stocks*

Indexes based upon these estimates are presented in the following tabulation for the years 1941 and 1952, together with an index of the physical volume of production arising in the private economy.[4]

The limitations of the estimates mentioned in the earlier discussion of depreciation and discards apply with perhaps more force to the estimates of capital stocks.

As can be seen from table 4 gross physical stocks of producers' durable equipment (expressed in constant 1947 prices) rose by more than four-fifths from 1941 to 1952. Over the same period net stocks more than doubled.

The larger increase of net stocks (implying a higher ratio of net stocks to gross stocks) is due to the fact that as a result of the high volume of postwar investment the average age of the capital stock was lower in 1952 than in 1941.

**Table 4. Indexes of Stocks of Producers' Durable Equipment, and of Private Gross Product in Constant (1947) Dollars, 1941 and 1952**

| | 1941 | 1952 |
|---|---|---|
| Gross stocks, end of year | 100 | 185 |
| Net stocks, end of year | 100 | 210 |
| Private gross product | 100 | 147 |

Source: U. S. Department of Commerce, Office of Business Economics.

The detail underlying the estimates indicates that equipment of an average age of up to 5 years, which had constituted less than two-fifths of the stock in the prewar year accounted for about one-half of it in 1952. Equipment of an average age of 5 to 10 years, which had constituted about 15 percent of the stock in 1941, accounted for about 20 percent of the total in the later year. Offsetting shifts occurred in the relative importance of equipment of an age of 10 years or more.

These changes in the age distribution were due mainly to the fact that a large volume of new investment has decreased the average age of most major types of equipment in stock; changes in the relative importance of equipment of various average life times had little influence on the results.

### *Stock of equipment and national product*

When gross stocks of producers' durable equipment are related to the volume of production originating in the private economy, it appears that the ratio of capital equipment to output was higher in 1952 than it was in 1941. The absolute

4. This total, private gross product, is defined as gross national product less the compensation of Government employees. Government employees' compensation, which measures the Government's contribution to gross national product, is excluded because the data on producers' durable equipment are restricted to the private economy.

(*Continued on page 24*)

percentage distribution in recent years is estimated to have been as follows:

| | 1940 | 1945 | 1950 |
|---|---|---|---|
| | (Percent) | | |
| Retail trade | 44 | 30 | 38 |
| Services | 21 | 21 | 20 |
| Manufacturing | 11 | 18 | 15 |
| Wholesale trade | 8 | 9 | 11 |
| Other industries | 16 | 13 | 16 |

The major changes in this distribution over the past decade have been in manufacturing and in trade. The great wartime expansion in manufacturing activity was largely in the production of defense and other nonconsumer goods, and was therefore not reflected proportionately in retail trade. In addition, the labor shortage and the draft brought a decrease between 1940 and 1945 in the number of small retail enterprises such as are likely to rent their premises. Since the war, the number of retailers has declined further relative to the number of firms in industry generally, and the average size of retail enterprises as measured by sales has shown a large increase.

### *Personal landlords*

It is estimated that nearly two-thirds of all business rents are paid to persons (including proprietors of unincorporated businesses other than real estate enterprises). The fraction was somewhat lower in 1929–38, when it ranged from one-half in 1932 to about three-fifths later in the decade. Fluctuations have probably been due in part to actual transfers of rental property between the business and personal sectors, and in part to the marginal rentability of many of the personal holdings.

Persons' total receipts shown in table 6 include royalties as well as rents. The royalty component represents gross income from patents, copyrights, and mineral and other lands leased on a royalty basis. Like the rent component, it is calculated indirectly and is subject to a considerable margin of error.

Personal net rent and royalty income after expenses seems to have increased sharply after the war, passing its predepression level for the first time in 1946. Between 1946 and 1950 the rate of rise gradually tapered off; tentative estimates for 1951 and 1952, however, indicate a continued expansion.

In the depression of the 1930's, persons' net nondwelling rents declined more than two-thirds. Subsequent recovery was delayed and limited by rising cost prices; at the end of the prewar period, such property was yielding in aggregate little more than half the net return it had produced in 1929. After substantial gains in 1942, persons' net nondwelling rents rose only moderately during the war. Their postwar advance, however, had carried them 80 percent above 1929 by the end of the period covered in table 6. In general, these fluctuations have been similar to those in persons' net income from rental housing.

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figures indicate that stocks were in the neighborhood of five-tenths of total output in 1941. In 1952 this ratio was about six-tenths. A shift in the same direction is indicated in the ratio of net stocks to output.

In the proper interpretation of these shifts, allowance should be made for the degree to which the stock of equipment was utilized in the 2 years. Unfortunately, there is little quantitative evidence bearing on this point. It seems apparent that productive capacity was not fully utilized in 1941. In 1952 the economy operated at levels much closer to capacity as far as the utilization of manpower is concerned. However, in certain segments of it a substantial part of the stock of equipment may not have been used. This was probably true of defense industries in which the post-Korean defense program provided standby capacity, but may have applied also in some degree to other industries.

Information on capital-output ratios prior to 1941 would further aid in the evaluation of the data that have been presented. Estimates of the stock of producers' durable equipment strictly comparable to those shown in this report are not available for years before 1941, and the data on gross product prior to 1929 are subject to considerable error. On the basis of existing evidence, however, it would appear, that the current ratio of net stocks to output is about the same as in the prosperous years of the 1920's. The net stocks to output ratio was lower before the war as a result of the relatively small equipment purchases during the thirties.

### *Changes in product composition*

The fourth chart shows the percentage increase in the total stock of producers' durable equipment from 1941 to 1952 broken down by major types of products. The data are given both on a gross and on a net stock basis. On both bases the machinery group as a whole increased more than the total capital stock. Transportation equipment and the miscellaneous "other equipment" group, which includes furniture and fixtures, instruments, etc., increased less. Within the machinery group both agricultural machinery and tractors and nonagricultural machinery shared in the disproportionate rise. The relatively small increase of the transportation group was due entirely to transportation equipment other than motor vehicles. Motor vehicles showed a larger than average rise.

Transportation equipment, other than motor vehicles, consists mostly of railroad equipment and ships. Substantial amounts of new railroad equipment were purchased in recent years as part of the industry's modernization program. This was accompanied by heavy scrapping of old equipment. Productive capacity has undoubtedly expanded more than suggested by the stock comparisons summarized in the chart. As has been noted earlier, these comparisons cannot take full account of quality improvements. Nor can they take into account the more effective use of rolling stock in the industry.

It can be seen from the chart that for most groups net stocks have increased faster than gross stocks, indicating that the average age of the major types of capital equipment is lower currently than in 1941. The only apparent exception is the motor vehicles group where the percentage increases in net and gross stocks are about the same. Statistical estimating problems in this area are particularly difficult and this result should therefore be interpreted with caution.